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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/800,291	03/06/2001	Tarun Bandyopadhyay	064798.0002	4665

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EXAMINER

COLAIANNI, MICHAEL

ART UNIT

PAPER NUMBER

1731

DATE MAILED: 04/14/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.
09/800,291

Applicant(s)
Bandyopadhyay et al.

Examiner
Michael Colaianni

Art Unit
1731



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Mar 6, 2001
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-49 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-49 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s). 7 6) ☐ Other:

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Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-49 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1, 15 and 36 use the language "usual method" and "conventional methods" which are deemed to be indefinite because it is not clear which "usual method" and "conventional methods" are meant to be encompassed by such language.

Claims 2, 16, 37 refer to a density range but fail to provide units of measurement which renders the claim indefinite.

Claims 10 and 30 refer to sintering in the germania rich atmosphere which lacks antecedent basis.

Claim 15 uses the word "improved" in the preamble which is improper and indefinite because it is not clear which parts of the claims are deemed to be improvements and which are conventional in the art.

Claim 24 refers to "the developed fibers" which lacks antecedent basis.

Claim 24, refers to "RE ion" which lacks antecedent basis.

Claim 24, refers to "the two" which lacks antecedent basis

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Claim 25, refers to "the pump beam" which lacks antecedent basis.

Claim 26, refers to "the fibers" which lacks antecedent basis.

Claim 29, refers to "the developed fibers" and "the fibers" which lack antecedent basis.

Claims 32 and 33 refer to "of RE" which lack antecedent basis.

Claim 45 refers to "Er salts" which lack antecedent basis.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 14, 35 and 49 are rejected under 35 U.S.C. 102(b) as being anticipated by DiGiovanni et al. 5058976.

DiGiovanni et al. teach an optical fiber doped with a erbium so that is distributed along a Gaussian distribution curve (col. 10, Example 1 and Figure 5).

Claims 14, 35 and 49 are product-by-process claims and as such only the product limitations are of significance. The process limitations are given no patentable weight in determining the patentability of the claims. See MPEP §2113.

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Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459

(1966), that are applied for establishing a background for determining obviousness under 35

U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. Claims 1-13, 15-34 and 36-48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yang 6125659 in view of DiGiovanni et al. 5058976.

Yang teaches steps (a) to (I) (col. 8-9, lines 43-68, 1-65 and claim 1). Yang also teaches using the erbium doped fiber for optical amplifiers (col. 1, lines 15-20). However, Yang does not teach some of the particular times, concentrations and temperatures; the coating of the preform with a silica tube; particular chemical attributes of the process; or the claimed fiber attributes in claims 24-29, 45-47.

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However, DiGiovanni et al. teach that it is known to use phosphorous and fluorine in the cladding layer and to use place a silica tube over the doped preform prior to drawing into a fiber (col. 10, lines 25-68). DiGiovanni et al. also teaches using an erbium chloride as the doping salt and using aluminum chloride salt (col. 10, lines 25-68). DiGiovanni also teaches using a chlorine and oxygen mixture to dehydrate the coating (col. 10, lines 25-68). DiGiovanni also teaches sintering in a germania atmosphere to reduce the loss of germanium (col. 10, lines 45-50). DiGiovanni also teaches using an oxidizing step before drying (col. 10, lines 25-68).

The claims directed to the particular density and other fiber characteristics achieved would obviously be achieved in a fiber produced by the Yang in view of DiGiovanni process because the method used by Yang in view of DiGiovanni is the same as used by applicant and thus the product produced must have the same properties.

Moreover, the claims to the various temperature increments and temperatures used would have been obvious over Yang in view of DiGiovanni because optical fiber production is more of an art than a science and given Yang in view of DiGiovanni's teachings, one of ordinary skill in the art would know to manipulate the temperature, ratio of chemicals, chemical concentrations and other variables taught by Yang and DiGiovanni to achieve the desired end optical fiber product.

It would have been prima facie obvious at the time the invention was made to combine DiGiovanni et al.'s teachings with Yang's method of making erbium doped optical fiber because

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both DiGiovanni and Yang are persuing a similar endeavor: the production of erbium doped optical fiber. Also, for the reasons given above in the body of the rejection.

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Colaianni whose telephone number is 703-305-5493. The examiner can normally be reached on Monday to Friday from 8:00 AM to 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin, can be reached on (703) 308-1164. The fax phone number for the organization where this application or proceeding is assigned is 703-305-7115.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

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April 11, 2003

A handwritten signature in black ink, appearing to read "Michael Colaianni", with a stylized flourish at the end.

**MICHAEL COLAIANNI
PRIMARY EXAMINER**